

REMARKS

This argument responds to the Office Action which was mailed on November 16, 2004. In light of a telephone interview with the examiner held on February 7, 2005, and the arguments and remarks set forth below, it is respectfully submitted that Claims 1-7, 10-12, and 17-20 are in condition for allowance. Applicant requests a favorable reconsideration of this application in light of the remarks set forth below which constitute a full and complete response to the outstanding Office Action.

In the examiner's final rejection dated November 16, 2004, it was asserted that Gallet meets the limitation of Claim 1 and Claim 17 which recites that the head harness is attached at a surface of the face protection shell or face seal (an element of the face protection assembly or gas mask) and which is capable of engaging the back of the user's head. In applicant's invention as recited in Claims 1 and 17, the face protection assembly or gas mask head harness directly engages the wearer's head. After a telephone interview with examiner, it was agreed that Gallet does not, in fact, teach or disclose the gas mask head harness directly engaging the wearer's head. Rather, Gallet discloses the gas mask element of the invention engaging or attaching to the outer surface of the helmet. Therefore, it is respectfully submitted that Gallet does not actually teach, disclose, or even suggest all of the claim limitations of Claims 1 and 17 and that, therefore, the rejection under 35 U.S.C. § 103(a) should be withdrawn.

More particularly, it has been asserted that Gallet teaches the head harness attached to the shell of the mask as shown in the Figure 9. However, it is respectfully submitted that Gallet does not teach an adjustable head harness as a component of the face protection shell or mask. Rather, Gallet discloses a two-point spring and hook

system which attaches the mask (face protection shell) to the helmet of the user. The two-point hook and spring system can then be tightened to secure the mask to the face of the user. The face protection shell or mask of Gallet does not teach or suggest the adjustable head harness as claimed by applicant. Gallet's device and applicant's invention differ in a very fundamental way. Applicant's face protection shell (or mask) includes its own adjustable head harness which is capable of engaging the back of the user's head to thereby adjustably secure the face seal and nosecup assembly to the user's face. This adjustable harness is included as an element of the face protection shell in Claims 1 and 17, and is described on page 10, lines 1-9, of the specification. In contrast, the face protection shell or mask of Gallet does not include a head harness to secure the mask to the user's face, but rather only attaches to the sides of the helmet through the two-point hook and spring system. In Gallet, only the helmet (not the mask) includes a head harness to engage the head of the user, but it is not part of the mechanism for securing the mask to the face of the user, it merely supports the helmet on the user's head.

It should be recognized that applicant's have designed a modular helmet-mask assembly that addresses a long desired need to provide both helmet and face mask protection while maintaining a face seal that provides a very high protection factor required for military personnel operating in a chemical or biological warfare environment. Thus, the face seal made by the head harness securing the mask to the face is a critically important element of applicant's invention which is not disclosed by Gallet. It does this by including an internal harness system as part of the mask which seals the mask (face protection shell) to the face of the user, and lets the helmet system be engaged

with the mask in a fashion that will not effect the seal after the helmet is attached to the face protection shell and the helmet stabilized. While many helmets provide crash and ballistic protection, applicants are not aware of any that provide internal chemical-biological protection without the use of some external means of forced blown filtered air.

In fact, the approach used by Gallet for integrating a mask and helmet shell has been used in the past in a number of integrated helmet-mask projects. Failure of these systems to achieve the protection levels required for chemical-biological protection ultimately lead to applicant's invention. Attaching a mask to a helmet in a manner described by Gallet is suitable for the low levels of protection previously needed by police and firefighters. Commercial standards require a 50:1 protection factor for negative pressure respirators. Military chemical-biological protection requirements mandate a protection factor of at least 10,000:1. Achieving these high levels of protection in a negative pressure system requires the use of a multi-point suspension head harness. Gallet cannot achieve these high levels of protection because the seal is being pushed onto the face with a two-point attachment system to the helmet which is inadequate to achieve a uniform seal distribution on the face. This uneven distribution of the seal not only provides inadequate protection, but can also create significant discomfort for the wearer thereby limiting sustained operations.

In addition, engagement of the mask and helmet shell as required for modular integration must not interfere with the sealing quality of the mask. The Gallet system uses blocks to limit ratcheting the mask facepiece. This approach prevents the mask seal from properly engaging the wearer's face unless the head is precisely aligned in the helmet shell prior to engagement of the mask facepiece. As a result, a custom fit

operation must be performed in order to achieve even the low levels of protection offered by this design.

In contrast, applicant's design provides a high, military level, protection factor because the mask (face protection shell) is sealed to the face using an adjustable head harness which engages the back of the wearer's head and is preferably connected to the mask facepiece, as reflected in Claim 1. In addition, Claim 17 clearly recites a method for donning the mask-helmet assembly such that an effective seal is maintained even after the helmet is engaged to the mask. Applicant's invention also provides for an adjustment pad at the back of the helmet to better position the helmet on the user's head. Gallet does not teach, disclose, suggest or provide motivation for the applicant's invention as recited in Claims 1 and 17. Of course, Claims 2-7 and 10-12 are dependent from Claim 1, and Claims 18-20 are dependent from Claim 17, and are further limiting thereto. Therefore, these claims should also be in condition for allowance.

It should also be noted that Lane was previously relied on to teach a common head harness for adjusting fit. However, it should be recognized that Lane teaches a facepiece or mask harness which only attaches to the helmet's headband assembly or suspension system. It does not directly interface with the wearer's head to provide a highly effective seal for the mask. In addition, Lane teaches an external filtration system for providing filtered air. In contrast, applicant's invention includes a mask having an internal head harness which allows the seal of the helmet system to "float" in a fashion so that the seal will not be affected after the face-protection assembly is engaged on the helmet and the helmet is stabilized. It should be clear that Lane does not teach or suggest the modular helmet-mask assembly having an integrated gas mask filtration and face seal

for the wearer, as recited in Claims 1 and 17, and can not be combined with Gallet to do so.

It is respectfully submitted that since the elements of Claims 1 and 17 are not taught, disclosed, or even suggested by the teachings of Gallet or the other prior art previously cited, nor is any motivation provided for the claimed elements of applicant's invention, Claims 1 and 17 should be considered patentable and in condition for allowance. Moreover, since Claims 2-7 and 10-12 are directly or indirectly dependent from Claim 1 and are further limiting thereto, and since Claims 18-20 are directly dependent from Claim 17 and are further limiting thereto, Claims 2-7, 10-12, and 18-20 are also patentable and in condition for allowance.

In summary, Claims 1-7, 10-12, and 17-20 remain in the case and based on the foregoing arguments and telephone interview with the examiner should not be considered obvious over the prior art cited. Accordingly, it is respectfully submitted that these claims are patentable and in condition for allowance. Early reconsideration and withdrawal of the rejections is earnestly solicited, as is allowance of the claimed subject matter.

Respectfully submitted,

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DATE


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